KUZNETSOV, Ye.I.; POLIKARPOV, V.V.

Improve the blowing of press-and-blow machines. Stek. i ker. 22 no.2:30-32 F '65. (MIRA 18:3)

DOCENT YE. K. KUZNETSOV

USSR/Communications Oct 48
Bibliography

"New Dissertations Submitted at the Moscow Electrotechnical Institute of Communications Engineers," Docent Ye. K. Kuznetsov, Cand Tech Sci, Acad Secy, Sci Union MEIIS, 1 3/4 pp

"Elektrichestvo" No 10

Summarizes 18 dissertations for degree of candidate of technical sciences.

[redacted] 22/49T3

KUZNETSOV, Yevgeniy Konstantinovich; FINKLER, I.Ye., otvetstvennyy redaktor; DOBRYNINA, A.Ya., redaktor; LEDNEVA, N.V., tekhnicheskiy redaktor

[Telephone apparatus] Telefonnye apparaty. Moskva, Gos. izd-vo lit-ry po voprosam sviazi i radio, 1956. 295 p. (MLRA 9:9)
(Telephone--Apparatus and supplies)

FINKLER, Isaak Yekhil'yevich, inzh.; KUZNETSOV, Ya.K., dots., otv. red.; KIRILLOV, L.M., red.; OLUTSKIN, A.A., tekhn. red.

[Electroacoustical characteristics of a telephone channel] Elektroakusticheskie kharakteristiki telefonnogo trakta. Moskva, Gos. izd-vo lit-ry po voprosam sviazi i radio, 1961. 131 p. (MIRA 15:2)
(Electroacoustics) (Telephone)

CHERCHENKO, G.V.; KAPTEL', O.I.; KUZNETSOV, Ye.L.; KHOZHAYLOV, N.K.

Measuring the density of formation oils. Trudy Giprovostoknefti no.3:338-352 '61. (MIRA 14:12)

(Petroleum--Density)

S/081/62/000/008/024/057
B160/B101

11.1000

AUTHORS: Kaptel', O. I., Kuznetsov, Ye. L., Khozhaylov, N. K., Chernenko, G. V.

TITLE: Float instrument with ultrasonic positioning of the float, for measuring the density of a liquid under pressure

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 8, 1962, 148, abstract 8Ye12 (Sb. "Primeneniye ul'traakust. k issled. veshchestva". no.14. M., 1961, 323 - 336)

TEXT: The calculations for a float-type instrument for determining the density of a liquid under pressure are given and its sensitivity is indicated. Electrical and ultrasonic methods of positioning the float are discussed. The maximum error in density introduced by the electrical method is $7 \cdot 10^{-5}$ g/cm^3. Calculations are given for an ultrasonic float-positioning method based on the changes in amplitude of a reflected pulse which accompany changes in the orientation of the reflector and crystal planes in relation to each other. The ultrasonic method was checked experimentally. At a frequency of 30 Mc/s the ultrasonic method provides

Card 1/2

Float instrument with ultrasonic... S/081/62/000/008/024/057
B160/B101

sufficient accuracy in determining the density of a liquid. The instrument was calibrated with mixtures of alcohol and water. Check measurements show the mean arithmetic error in determining density to be about 0.4%. The results of measuring the densities of petroleum in strata of the Chubovka deposit at pressures of 35-300 atm are given. The petroleum's coefficient of compressibility is $6 \cdot 10^5$ g/cm^{2}atm. [Abstracter's note: Complete translation.]

Card 2/2

ZAL'TSMAN, K.F., inzh; POLYANTSEV, V.A., inzh; KUZNETSOV, Ye.N., inzh.

Construction of pipelines in Central Asia. Stroi. truboprov. 3 no.8:11-13 Ag '58. (MIRA 11:11)
(Soviet Central Asia--Gas, Natural--Pipelines)

KUZNETSOV, Ye.N., inzh.; SHOR, L.D., inzh. (Samarkand)

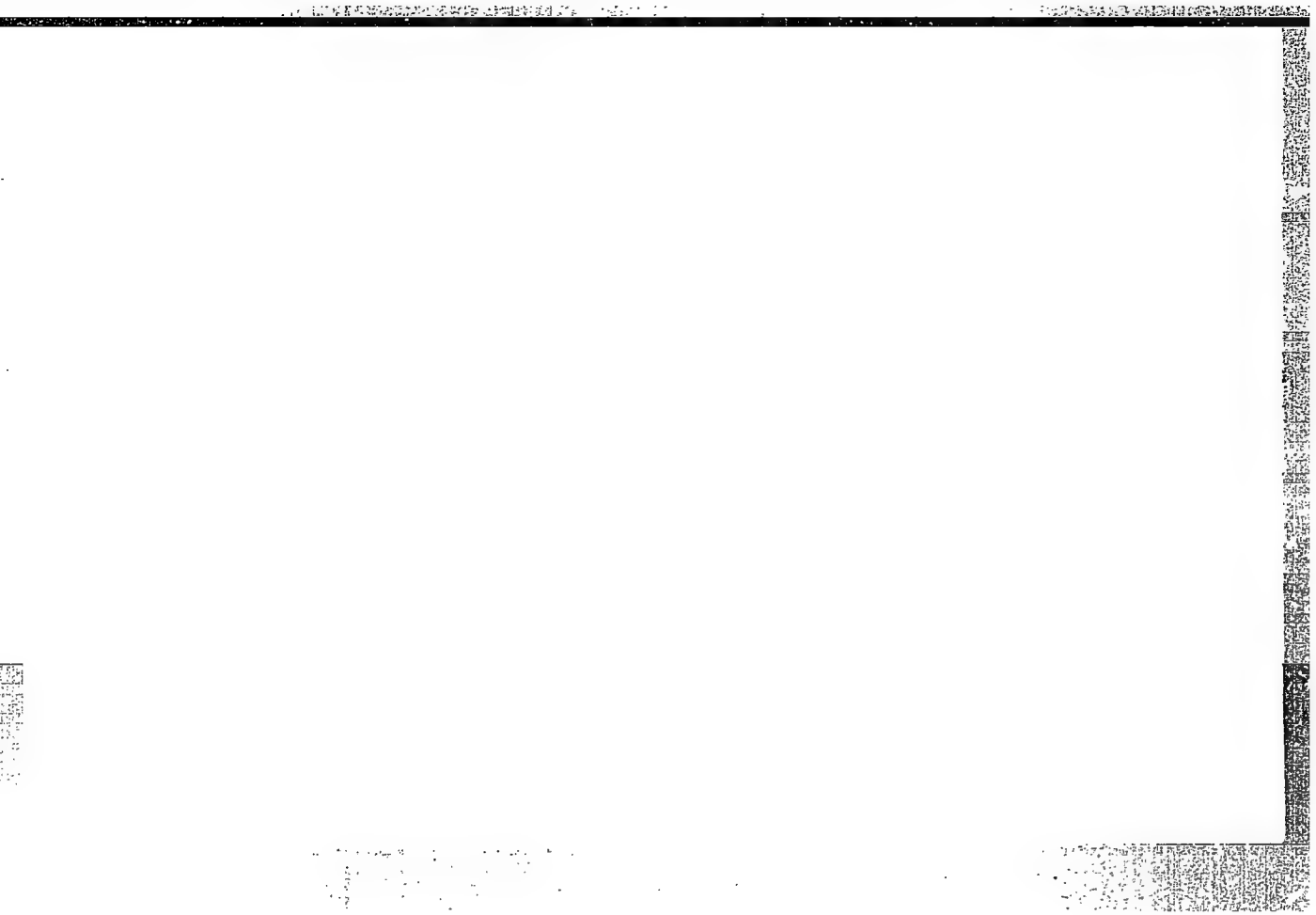
Suspension crossings of the Dzharkak-Bukhara-Samarkand-Tashkent gas pipeline. Stroi.truboprov. 5 no.11:21-23 N '60. (MIRA 13:11)

(Gas, Natural--Pipelines)

KUZNETSOV, Ye.N., inzh.; CHERNETSOV, P.P., kand.tekhn.nauk

Applying thicker protective coating in one operation. Stroi. truboprov. 6 no. 1:17-18 Ja '61. (MIRA 14:2)
(Protective coatings) (Gas, Natural--Pipelines)

gyroscope motion



SHAL'NOV, A.P., kand. tekhn. nauk; KUZNETSOV, Ye.N., inzh.

Let's improve the organization and technology of building water pipelines in the Virgin Territory. Stroi. truboprov. 7 no.1:5-7 Ja '62. (MIRA 16:7)

(Earthwork)
(Virgin Territory—Water—Distribution)

KUZNETSOV, Ye.N. (Moskva)

Motion of a magnetized symmetric gyroscope in a magnetic field. Izv. AN SSSR. Mekh. i mashinostr. no.6:143 N-D '63. (MIRA 17:1)

KUZNETSOV, YE. P.

KOTENKO, L.P.; POPOV, Yu.S.; KUZNETSOV, Ye.P.

Rectangular bubble chambers with operating volume of 750 cm^3 having plates. Prib. i tekh. eksp. no.1:36-39 Ja-F '57. (MLRA 10:6)

1. Fizicheskiy institut im. P.N. Lebedeva Akademii nauk SSSR.
(Photography, Particles track) (Ionization chambers)

KUZNETSOV, YE. P.

56-1-50/56

AUTHORS: Alikhanyan, A. I., Kirillov-Ugryumov, V. G., Kotenko, L. P., Kuznetsov, Ye. P., Popov, Yu. S.

TITLE: The Angular Distribution of Positrons in the $\tau^+ - \mu^+ - e^+$ - Decay in Propane (Uglovoye raspredeleniye pozitronov pri $\tau^+ - \mu^+ - e^+$ - raspade v propane)

PERIODICAL: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1958, Vol. 34, Nr 1, pp. 253 - 254 (USSR)

ABSTRACT: The measurements discussed here are also important from the standpoint of the suitability of propane for measurements of the phenomena of angular correlations which are of the same nature as the μ-e-decays. The authors in this connection think of an extensive use of propane bubble-chambers. The test arrangement is illustrated by a figure. A bubble chamber with the volume (7,2 x 6,5 x 16)cm^3 was irradiated in a polyethylene-target with a beam of positive pions with the energy 175 MeV in the phasotron of the United Institute for Nuclear Research (Ob"yedinennyy institut yadernykh issledovaniy). Altogether 8000 photographs were taken on which 6670 $\tau^+ - \mu^+ - e^+$-decays were determined. The authors determined the angular distribution for the projections of the spatial angles to the plane of the photoplate. The experimentally determined angular

Card 1/2

The Angular Distribution of Positrons in the $\pi^+ - \mu^+ - e^+$-Decay in Propane 56-1-50/56

distribution of the decay electrons is illustrated in a diagram. This distribution can be approximated sufficiently well by a function written down here. The ratio (number of electrons emitted in the angular interval 90 - 180°)/(number of electrons emitted in the interval 0 - 90°) is 1,19. This corresponds to a coefficient $A = -0,22 \pm 0,03$ in the expression $(1 + A \cos \vartheta)$ for the distribution of the solid angles. The angles in the last-mentioned ratio were related to the direction of the projection of the initial impulse of the positive myons. There are 2 figures, and 5 references, 2 of which are Slavic.

ASSOCIATION: Physical Institute imeni P. N. Lebedev AN USSR (Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR)

SUBMITTED: October 25, 1957

AVAILABLE: Library of Congress

Card 2/2

AUTHORS: Alikhanyan, A. I., Kirillov-Ugryumov, V.G., Kotenko, L. P., Kuznetsov, Ye. P., Popov, Yu. S. SOV/56-34-5-8/61

TITLE: The Angular Anisotropy in a $\pi^+ - \mu^+ - e^+$-Decay, Measured in a Propane Bubble Chamber (Uglovaya anizotropiya pri $\pi^+ - \mu^+ - e^+$ -raspade, izmerennaya v propanovoy puzyr'kovoy kamere)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol. 34, Nr 5, pp. 1101-1109 (USSR)

ABSTRACT: The authors investigated the angular anisotropy in a $\pi^+ - \mu^+ - e^+$ -decay with discrimination of the decay electrons with respect to energy. These decays were recorded by a propane bubble chamber. This chamber was irradiated in a beam of positive pions on the phasotron of the Ob"yedinennyy institut yadernykh issledovaniy (United Institute of Nuclear Research). The positive pions were produced by 660 MeV protons on an external polyethylene target. The authors give a short description of the measuring device. They measured the projections of the solid angles between the momenta of the positive myon and the electron on the plane of the film in the photographic camera. In this case the distribution $dN \sim [1 + a(\pi^2/16)\cos\varphi]\, d\varphi$ is to be used. A figure gives the distributions of the projections of the

Card 1/4

The Angular Anisotropy in a $\pi^+ - \mu^+ - e^+$ -Decay, Measured in a Propane Bubble Chamber

SOV/56-34-5-8/61

angles between the initial momenta of the positive myon and of the electron for 6670 $\pi^+ - \mu^+ - e^+$ -decays. The experimental distribution is well approximated by the above mentioned formula. The coefficient A, which is found from the relation "(backward/forward)", was equal to $A = -0,22 \pm 0,03$. The results of the measurements discussed in this paper lead to the following conclusions: 1) When the energy of the electrons which are produced in the $\mu^+ - e^+$ -decay increased, also the angular anisotropy increases. This fact is not inconsistent with the theory of the two-component neutrino. The coefficient A in the distribution of the angles between the momenta of the myon and the electron is equal to $A = -0,22 \pm 0,03$. (This coefficient A was found by recording of the $\pi^+ - \mu^+ - e^+$ -decays in a propane chamber). The value of this parameter, averaged over 5 investigations with propane chambers (after taking into account a correction due to the depolarization) is equal to $a = -0,28 \pm 0,03$. This value nearly coincides with the value of the parameter averaged over 9 investigations with photographic emulsions. The mean value of the results of the measurements with propane bubble chambers and with photo-

Card 2/4

The Angular Anisotropy in a $\pi^+ - \mu^+ - e^+$ -Decay, Measured in a Propane Bubble Chamber

SOV/56-34-5-8/61

graphic emulsions is equal to a = -0,283 ± 0,023. The distribution of the angles between the meson momenta in the $\pi^+ - \mu^+$ decay is isotropic. In an appendix to this paper the relation between the spatial distribution of the angles and the distributions of the projections of the angles upon the planes of the $\mu - e$ -decays and of the $\pi - \mu - e$ -decays is calculated. The authors thank Professor V.P. Dzhelepov who enabled them to carry out their experiments on the phasotron of the Ob"yedinennyy institut yadernykh issledovaniy. Further, the authors thank B.A. Dolgoshein for his valuable discussions; L.A. Kuzin, A.V. Samoylov and F.M. Sergeyev for their participation in the evaluation of the experimental results and A.A. Bednyakov for his help in the experiments at the phasotron. There are 6 figures, 1 table, and 14 references, 4 of which are Soviet.

ASSOCIATION: Fizicheskiy institut im. P.N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P.N. Lebedev, AS USSR)

Card 3/4

The Angular Anisotropy in a $\pi^+ - \mu^+ - e^+$ -Decay, Measured in a Propane Bubble Chamber SOV/56-34-5-8/61

SUBMITTED: December 12, 1957

1. Radioactive substances--Decay 2. Propane bubble chambers --Applications 3. Proton bombardment--Applications

Card 4/4

21(7) SOV/56-35-5-45/56

AUTHORS: Kirillov-Ugryumov, V. G., Kotenko, L. P., Kuznetsov, Ye. P., Sergeyev, F. M.

TITLE: The Elastic Scattering of π^+-Mesons on Carbon at Energies of 5 + 22 MeV (Uprugoye rasseyaniye π^+-mezonov na uglerode pri energiyakh 5 + 22 MeV)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 5, pp 1300-1302 (USSR)

ABSTRACT: For their measurements the authors used a propane bubble chamber having a volume of 750 cm^3. This chamber was irradiated on the phasotron of the Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute for Nuclear Research) with a beam of positive pions. The energy interval investigated corresponds to the residual ranges of from 0.125 to 2 g/cm^2 of pions in propane. The pions were ascertained by the $\pi \rightarrow \mu \rightarrow e$ decay when being slowed down in the working substance. A total of 5675 photographs of photon traces was dealt with. Formation of stars by pions at from 5 to 22 MeV was not investigated, the inelastic scattering of positive pions is only inconsiderable at these energies. The authors determined the angular projections of the single scattering.

Card 1/3

The Elastic Scattering of π^+-Mesons on Carbon at Energies of 5 + 22 MeV

of pions to the plane of the film in the photographic camera. Of the 5675 pions 75 were scattered round an angle (within the energy interval investigated), the projection of which is greater than 15^0. After Coulomb (Kulon) scattering was taken into account, 31 nuclearly scattered particles remained. The corrections taken into account when determining the nuclear scattering on carbon are given. A table contains the elastic scattering cross sections of pions determined by the authors of the present paper as well as by other authors. At energies of 8 - 22 MeV the cross sections found have the same values within the error limits as the elastic scattering cross sections at 33 MeV. At 5 - 8 MeV the scattering cross section increases quite considerably. Within this energy range the wavelength of the pion already exceeds the dimensions of the carbon nucleus. An analysis of the cross section energy dependence and of the angular distributions will be published later. The authors thank Professor A. I. Alikhanyan for the interest he displayed in this work, and Professor V. P. Dzhelepov for making it possible to carry out measurements on the phasotron of the Institute for Nuclear Research. There are 1 table

SOV/56-35-5-45/56

The Elastic Scattering of π^+-Mesons on Carbon at Energies of 5 + 22 MeV

and 13 references, 4 of which are Soviet.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev of the Academy of Sciences, USSR)

SUBMITTED: July 10, 1958

Card 3/3

SOV/120-59-1-9/50

AUTHORS: Kirillov-Ugryumov, V. G., Kotenko, L. P., Kuznetsov, Ye. P., Samoylov, A. V.

TITLE: Determination of the Masses and Momenta of Charged Particles from Multiple Scattering in a Propane Bubble Chamber.

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 1, pp 44-47 and 1 plate (USSR)

ABSTRACT: 246 photographs of particle tracks which came to rest in the bubble chamber (Ref.2) were examined. The tracks were analyzed by measuring the multiple scattering by the chord method suggested by Goldschmidt-Clermont et al (Ref.1). To determine the masses the formula given by Olbert et al (Ref. 1) was employed. The following results were obtained:

$m = (268 \pm 23)m_e$	$t = 2$ cm	312 angles
$m = (263 \pm 37)m_e$	$t = 1$ cm	132 angles
$m_\mu = (196 \pm 25)m_e$	$t = 1$ cm	132 angles
$m_p = (1973 \pm 184)m_e$	$t = 2$ cm	288 angles

To determine the momenta Olbert's formulae were used (Ref.1)

Card 1/2

Determination of the Masses and Momenta of Charged Particles from Multiple Scattering in a Propane Bubble Chamber

and it was shown that in order to determine the momenta of mesons to 15% at 100 Mev, 25 cm of track in propane is sufficient, while for 200 Mev protons the track length is 50 cm. There are 4 tables, 2 figures and 4 references, of which 2 are Soviet and 2 English.

ASSOCIATION: Fizicheskiy institut AN SSSR (Physics Institute, Academy of Sciences USSR)

SUBMITTED: February 12, 1958.

S/109/60/005/009/014/026
E140/E455

AUTHORS: Perevodchikov, V.I. and Kuznetsov, Ye.P.

TITLE: The Possibility of Using Germanium Sulphide Photoresistances as Television Camera Tube Targets

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol.5, No.9, pp.1478-1483

TEXT: The use of GeS photoresistances in a vidicon-type television camera tube was proposed by Cashman in 1956. The present article presents the results of an experimental study of such photoresistances. An alloy of spectrally-pure germanium with sulphur was evaporated on to a glass base. Approximately stoichiometric proportions were used, where the GeS was separated from the germanium disulphide GeS_2 by sublimation, as well as from oxides and non-reacting residues. Layers were evaporated in vacuum on to glass plates with parallel electrodes 30 mm long with 0.5 mm gap. Resistivity and sensitivity of the photolayer were studied; as functions of the base temperature, the rate of evaporation, the residual gas pressure and the thermal treatment. It was found that the sensitivity and resistivity were not critical, subsequent heat treatment permitting compensation for variation in base

Card 1/3

S/109/60/005/009/014/026
E140/E455

The Possibility of Using Germanium Sulphide Photoresistances as Television Camera Tube Targets

temperature during evaporation. Residual gas pressures up to 10^{-3} mm Hg had practically no effect on the resistivity or the sensitivity. The layers obtained were fairly sensitive, with maximum sensitivity at 590 mμ, in individual layers shifting down as far as 560 mμ. Typical characteristics are shown in Fig.3. Since appreciable absorption occurs at wavelengths below 600 mμ, the sensitivity of the photolayer depends appreciably on its thickness. The temperature characteristics (Fig.4) indicate the presence of intrinsic and impurity conductivities. The width of forbidden zone obtained from the curve is 1.7 to 1.75 eV, the dissociation work of the impurity levels 0.9 to 0.95 eV. Although the layers were stable up to high temperatures, the sensivity decreased by a factor of 3 between 20 and 60°C, and by a factor of 8 up to 100°C. Vidicon samples were produced approximating to the Soviet type LI-18. A resolution of 500 to 550 lines was obtained. The target had appreciable inertia. With a motion of the test chart across the target at 2 to 2.5 mm/sec

Card 2/3

S/109/60/005/009/014/026
E140/E455

The Possibility of Using Germanium Sulphide Photoresistance as Television Camera Tube Targets

the resolution dropped to 300 to 350 lines. There are 5 figures and 1 English reference.

SUBMITTED: October 8, 1959

Card 3/3

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B006/B011

24.6900

AUTHORS: Alikhanyan, A. I., Kirillov-Ugryumov, V. G., Kotenko, L. P., Kuznetsov, Ye. P., Samoylov, A. V.

TITLE: Single Scattering of μ^--Mesons on Carbon at Energies of 10 - 30 Mev

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 38, No. 2, pp. 387 - 393

TEXT: The authors investigated the single μ^--meson scattering on carbon with a propane bubble chamber and compared the experimental results with theory. The chamber had a size of 370·104·100 mm. The μ^--mesons used for irradiation originated from the decay of π^--mesons from the synchrocyclotron of the Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research). The 150-Mev π^--mesons had been produced in the inner beryllium target of this synchrocyclotron. The experimental setup is briefly described. On an average 3 - 4 μ^- stopping points were recorded per photograph (with Industar-23 lenses), or a total of about 60,000. On interpreting the pictures, such

Card 1/4

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B006/B011

Single Scattering of μ^--Mesons on Carbon at Energies of 10 - 30 Mev

μ^--tracks were selected for analysis as were longer than 1.5 cm, which corresponds to an energy of over 10 Mev. The μ^--stopping point was identified according to the μ-e decay. Table 1 offers data concerning the flux and the energy spectrum of μ^--mesons. 48,100 ($\pm$ 2.3%) μ^--mesons were recorded, whose range was >1.5 cm. The investigated energy range of 10 - 30 Mev corresponded to a muon range of 1.5 - 10 cm in propane, the density of the latter amounting to 0.4 g/cm^3. Table 2 gives the numbers of scattering events recorded in angular intervals of 10° each between 15 and 85°, and in the interval 85 - 180°. The following columns of the table contain the numbers of events after correction for non-recording, the finite chamber size, the passage from one angular interval to another, the π^--decay, and the scattering on hydrogen. The correction factors averaged over the angular intervals are compiled in Table 3. The various corrections are discussed in greater detail. Column 7 of Table 2 contains the final numbers of scattering events after the application of all corrections. 204,350 cm μ^- tracks were evaluated, which number corresponds to 1260 nuclear path lengths of carbon. In this connection, 263 single scattering events on carbon were

Card 2/4

Single Scattering of μ^--Mesons on Carbon at Energies of 10 - 30 Mev

ascertained, whose angular projection onto the photographic emulsion was greater than 15°. The obtained angular distribution of μ^--mesons is illustrated by a diagram. The two curves show the theoretically calculated course with Coulomb scattering in the case of a finite nucleus (Curve 1, Column 8 in Table 2), and in the case of a point nucleus (Curve 2, Column 9 in Table 2). Finally, considerations concerning "anomalous" scattering are discussed; the cross section for an "anomalous" scattering, if any, cannot exceed $1.25 \cdot 10^{-28}$ cm^2 per nucleon at a scattering angle $>45^\circ$, for scattering through an angle $>90^\circ$ it cannot exceed $0.7 \cdot 10^{-28}$ cm^2 per nucleon. Not a single muon decay into three electrons was recorded among all 60,000 stopping events. Hence, the ratio $(\mu \rightarrow e + \nu + \bar{\nu})/(\mu \rightarrow e+e+e) < 1.7 \cdot 10^{-5}$ is derived. The authors finally thank Professor V. P. Dzhelepov for having rendered the experiments on the synchrocyclotron possible, and furthermore the co-workers of the laboratoriya yadernykh problem OIYaI (Laboratory for Nuclear Problems of the OIYaI), especially N. B. Yedovina and V. G. Svyatkina, as well as A. A. Bednyakov for his assistance. There are 1 figure, 3 tables, and 10 references:

Card 3/4

Single Scattering of μ^--Mesons on Carbon at Energies of 10 - 30 Mev

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B006/B011

5 Soviet, 3 British, 1 Indian, and 1 Dutch.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Institute of Physics imeni P. N. Lebedev of the Academy of Sciences, USSR)

SUBMITTED: August 11, 1959

Card 4/4

BANNIK, B.P.; GALPER, A.M.; GRISHIN, V.G.; KOTENKO, L.P.; KUZIN, L.A.; KUZNETSOV, Ye.P.; MERSON, G.I.; PODGORETSKIY, M.I.; SIL'VESTROV, L.V.

Elastic scattering of 2.8 and 6.8 BeV/c negative pions on carbon. Dubna, Izdatel'skii otdel Ob"edinennogo in-ta iadernykh issledovanii, 1961. 20 p.

(No subject heading)

ALEKSANYAN, A.S.; ALIKHANYAN, A.I.; VERESHCHAGIN, M.M.; GAL'PER, A.M.; KIRILLOV-UGRYUMOV, V.G.; KOTENKO, L.P.; KUZIN, L.A.; KUZNETSOV, Ye.P.; MERZON, G.I.

Freon 570 liter bubble chamber. Prib. i tekh.eksp. 6 no.6:34-38 N-D '61. (MIRA 14:11)

1. Fizicheskiy institut AN SSSR.
(Bubble chamber)

BANNIK, B.P.; GAL'PER, A.M.; GRISHIN, V.G.; KOTENKO, L.P.; KUZIN, L.A.; KUZNETSOV, Ye.P.; MERZON, G.I.; PODGORETSKIY, M.I.; SIL'VESTROV, L.V.

Elastic scattering of 2.8 and 6.8 Bev./c π^- mesons on carbon. Zhur. eksp. i teor. fiz. 41 no.5:1394-1401 N '61. (MIRA 14:12)

1. Ob"yedinennyy institut yadernykh issledovaniy i Fizicheskiy institut imeni P.N. Lebedeva AN SSSR.
(Mesons--Scattering) (Carbon)

KUZNETSOV, E.P.

(2)

KUZNETSOV, Yu. V., SHALAMOV, Yu. Ya., and GRASHIN, A. F., KUZNETSOV, E. P.

"Evidence for the Resonances in $K^0\gamma(\epsilon,\Lambda)$ Systems at 1650 and 1920 MeV."

Report presented at the Intl. Conference on High Energy Physics, Geneva, 4-11 July 1962

Institute of Theoretical and Experimental Physics, Moscow, USSR (Kuznetsov, Shalamov, Grashin)

Lebedev Institute of Physics, Moscow, USSR (Kuznetsov, E.P.)

S/056/62/042/005/003/050
B125/B108

AUTHORS: Kotenko, L. P., Kuznetsov, Ye. P., Merzon, G. I., Sharov, Yu. B.

TITLE: Elastic scattering of π^--mesons with a momentum of 2.8 Bev/c from hydrogen

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 5, 1962, 1158 - 1165

TEXT: Elastic scattering of 2.8-Bev/c negative pions from hydrogen nuclei was measured with a propane bubble chamber with zero magnetic field. The 306 two-pronged stars selected for the study originated from relativistic particles which entered the chamber with a scatter of not over 2°. 60 ± 8 of the elastic scattering events of negative pions pertained to stars of type 1 + 1p, and 13 ± 5 to stars of type 0 + 2p. The differential cross section of elastic π^--p-scattering in the c.m.s. first decreases rapidly from $d\sigma/d\Omega \sim 15$ mbarn/sterad at $\cos\vartheta^* = 1$, virtually approaching zero asymptotically. All this is indicative of a diffraction character of elastic scattering (small momentum transfer of the incident pion). 9% of

Card 1/3

the scattering events (with scattering angles of less than 3° in the laboratory system) were not recorded. The total cross section of elastic diffraction scattering amounts to $\sigma_d = 6.5 \pm 0.8$ mbarn, and the total cross section of all elastic processes to $\sigma_e = 7.8 \pm 0.9$ mbarn. The absorption cross section is $\sigma_a = 23.5 \pm 1.7$ mbarn, and the cross section of inelastic interaction is $\sigma_i = 22.3 \pm 1.7$ mbarn. For a spherical homogeneous nucleon of radius R and with a purely imaginary refractive index, the values corresponding to a standard deviation of the quantities σ_d and σ_t are respectively $R = (1.10 \pm 0.09) \cdot 10^{-13}$ cm and $K = (0.71 \pm 0.19) \cdot 10^{13}$ cm^{-1} (which corresponds to a root mean square radius of the proton $\langle r \rangle = (0.85 \pm 0.07) \cdot 10^{-13}$ cm) and fit well the experimental results. There are 7 figures. The most important English-language reference is: K. W. Lai, L. W. Jones, M. L. Perl. Phys. Rev. Lett., 7, 125, 1961.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev of the Academy of Sciences USSR)

S/056/62/042/006/042/047
B104/B112

AUTHORS: Kuznetsov, Ye. V., Kuznetsov, Ye. P., Shalamov, Ya. Ya., Grashin, A. F.

TITLE: Experimental data on the existence of resonance in the $K^0\Lambda^0$ system at 1650 Mev

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 6, 1962, 1675-1677

TEXT: Previous papers (Ya. Ya. Shalamov et al., ZhETF, 40, 1302, 1962; I. A. Ivanovskaya et al., IX. Intern. Ann. Conf. on High Energy Physics, Kiev, 1960. Plenary sessions I-V, Moscow, 1960, p. 459) have shown that in the pair production of K^0 and Λ^0 particles by 2.8-Mev π^- mesons on complex nuclei (C, Cl, F), i.e., in the reaction $\pi^- + (A,Z) \rightarrow \Lambda^0 + K^0 + m\pi + (AZ)^*$ $(m = 1,2, \ldots)$ (1), the angular distribution of the Λ^0 particles in the center-of-mass system of πN is directed backward and that the angular distribution of the K^0 particles is nearly isotropic. These angular distributions cannot be attributed to the production of $Y^* + K^0$, $Y^* + K^*$, or $\Lambda^0 + K^*$ with the subsequent decay reactions

Card 1/2

Experimental data on the existence ...

$Y^* \rightarrow \Lambda^0 + \pi$ and $K^* \rightarrow K^0 + \pi$. The angular distributions are explained by assuming, in (1), the intermediate reaction $\pi^- + N \rightarrow Z^0 + m\pi$, where $m = 1, 2, \ldots$ and $Z^0 \rightarrow \Lambda^0 + K^0$. In the center-of-mass system, the Z^0 particle travels from πN to the rear hemisphere. Results: $M_Z \approx 1650$ Mev; strangeness $S = 0$; spin $I = 1/2, 2/3, \ldots$; isotopic spin $I = 1/2$. Z^0 interacts as an individual particle with the nucleus. There are 2 figures.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki Akademii nauk SSSR (Institute of Theoretical and Experimental Physics of the Academy of Sciences USSR)
Fizicheskiy Institut im. P. N. Lebedeva AN SSSR (Physics Institute imeni P. N. Lebedev AS USSR)

SUBMITTED: March 24, 1962

Card 2/2

ACCESSION NR: AP4031191 S/0056/64/046/004/1504/1507

AUTHOR: Aleksanyan, A. S.; Alikhanyan, A. I.; Gal'per, A. M.; Kavalov, R. L.; Kirillov-Ugryumov, V. G.; Kotenko, L. P.; Kuzin, L. A.; Kuznetsov, Ye. P.; Marzon, G. I.

TITLE: Study of decays of $K^0_{1,2}$ mesons into three neutral pions

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 4, 1964, 1504-1507

TOPIC TAGS: neutral kaon decay, electron positron pair, kaon three pion decay, inelastic neutron interaction

ABSTRACT: This is an ellaboration of an earlier preliminary report (Sb. Voprosy* fiziki elementarny*kh chastits. Izd. AN ArmSSR, Yerevan, 1963, p. 324). Some 50,000 stereo photographs were taken and the events classified as K^0-meson decay were those with 3, 4, 5, or 6 electron-positron pairs directed approximately towards one point, and also V-events. The measure of the convergence of the γ quanta producing the pairs was the maximum distance h from the point of intersection of the trajectories of the two nearest γ quanta to the trajectories of the other γ quanta. Comparison of the histograms corresponding to different numbers of prongs indicates that there exist definite physical reasons which lead to the appearance

ACCESSION NR: AP4031191

of three or more electron-positron pairs whose vertices are directed approximately towards one point. The calculated probability for the $K_2^0 \to 3\pi^0$ decay relative to all K_2^0 meson decay is 0.2 + 0.06. This agrees with theoretical predictions (23.6%) obtained by assuming the validity of the $\Delta T = 1/2$ rule. "The authors are grateful to E. O. Okonov for a discussion of several problems during the planning of the experiment, to Academician V. I. Veksler, I. V. Chuvilo, and the proton synchrotron crew for making the irradiation possible, and also to I. B. Vartazaryan, L. P. Kishinevskaya, N. V. Magradze, and the laboratory group for help in the reduction of the experimental material. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute, Academy of Sciences, SSSR); Moskovskiy inzhenerno-fizicheskiy institut (Moscow Engineering Physics Institute); Fizicheskiy institut GKAE, Yerevan (Physics Institute GKAE)

SUBMITTED: 25Jan64 DATE ACQ: 07May64 ENCL: 01

SUB CODE: NP NR REF SOV: 004 OTHER: 001

ACCESSION NR: AP4031191

ENCLOSURE: 01

1 2

1 Вид события с электронно-позитронными парами	2 $N_{полн}$, $h < 4.8$ см	3 Число событий, появившихся в результате различных процессов, включая распады $K_2^0 \to 3\pi^0$			4 Число распадов $K_2^0 \to 3\pi^0$
		5 $N_{случ}$	$N(K_2^0 \to 3\pi^0)$	$N_{яд}$ 6	
Six	1*	0	0	0	1
Five	8	2	0	0	0
Four	28	8	3	0	17
Three	157	46	17	8	86
Сумма Sum	194	56	20	8	110

*Convergence parameter h = 2.1 cm.

1 - Number of electron positron pairs in event
2 - N_{total}, 3 - Number of events resulting from processes other than $K_2^0 \to 3\pi^0$ decays, 4 - Number of $K_2^0 \to 3\pi^0$ decays, 5 - number of random events, 6 - number of nuclear interactions

Card 3/3

5

L 58953-65 EPF(c)/EWT(1)/EEC(t) Pi-4 IJP(c) GO/WW
ACCESSION NR: AT5010455 UR/3138/64/000/273/0001/0008 31 29 B+1

AUTHORS: Verebryusov, V. S.; Veselovskiy, O. S.; Grashin, A. F.; Demidov, V. S.; Kuznetsov, Ye. V.; Kuznetsov, Ye. P.; Ponosov, A.K.; Protasov, V. P.; Surgayev, V. M.; Shalamov, Ya. Ya.

TITLE: Data on pp resonance with Q = 148 MeV 27

SOURCE: USSR. Gosudarstvennyy komitet po ispol'zovaniyu atomnoy energii. Institut teoreticheskoy i eksperimental'noy fiziki. Doklady no. 273, 1964, Dannyye o pp-rezonanse s Q = 148 Mev, 1-8

TOPIC TAGS: proton, proton resonance, diproton resonance, pion nucleon resonance, excitation energy

ABSTRACT: The authors present data on a possible new photon resonance with excitation energy 148 MeV. The photographs were obtained with a 17-liter bubble chamber filled with a freon mixture (without magnetic field), using the extracted beam of π^+ mesons of the OIYaI(Joint Institute of Nuclear Research) synchrocyclotron with energy E_0 = 80 Mev.

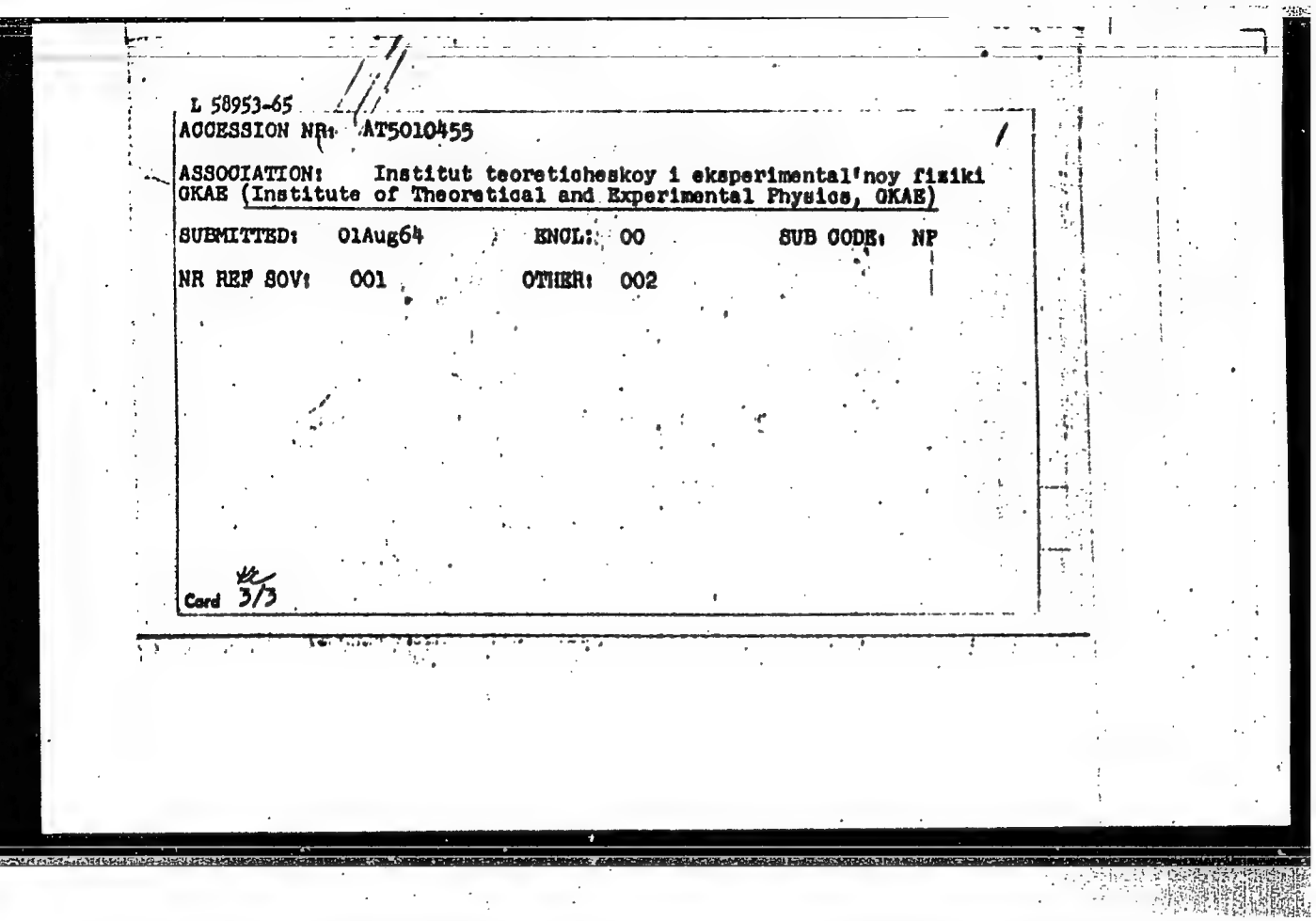
Card 1/3

L 58953-65

ACCESSION NR: AT5010455

Absorption of positive pions with formation of 1, 2, and 3 heavy particles (p, d, etc.) was investigated. The meson energy at the instant of absorption was 60 ± 20 MeV. Distributions of the event with production of two particles shows peaks at excitation energy values of 148 and 128 MeV. The same spectrum plotted for more symmetrical stars shows the 148 MeV peak more clearly. It is shown that the spectra can contain, besides the distribution with respect to the diproton mass, also components due to pd, dd, and similar stars, which can be mistaken for pp stars. The 128-MeV peak may be due to the presence of pd stars. The results indicate the possible existence of a diproton resonance with excitation energy 148 ± 3 MeV and width ~5 MeV, and also a pd resonance with approximate excitation energy 143 ± 3 MeV and width ~5 MeV. Such resonances could be observed in the presence of πN resonance with mass 938 ± 150 MeV, producing 'hypernuclei' by interacting with other nucleons. Work on a direct observation of the possible new πN resonance is continuing. 'The authors thank I. A. Alikhanov for a discussion of the results.' Original article has: 2 figures

Card 2/3



L 58953-65

ACCESSION NR: AT5010455

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics, GKAE)

SUBMITTED: 01Aug64 ENCL: 00 SUB CODE: NP

NR REF SOV: 001 OTHER: 002

Card 3/3

VESELOVSKIY, G.S.; GRASHIN, A.F.; DEMIDOV, V.S.; KUZNETSOV, Ye.V. [deceased]; KUZNETSOV, Ya.P.; PONOSOV, A.K.; PROTASOV, V.P.; SERGEYEV, F.M.; SHALAMOV, Ya.Ya.

Production of slow π^--mesons on light nuclei, and $\pi\pi$-interaction. IAd. fiz. 2 no.3:496-500 S '65. (MIRA 18:9)

1. Institut teoreticheskoy i eksperimental'noy fiziki Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR.

L 11913-66 EWT(m)/T/EWA(m)-2

ACC NR: AP6001156 SOURCE CODE: UR/0367/65/002/003/0496/0500

AUTHOR: Veselovskiy, G.S.; Grashin, A.F.; Demidov, V.S.; Kuznetsov, Ye. P.; Ponosov, A.K.; Protasov, V.P.; Sergeyev, F.M.

ORG: Institute of Theoretical and Experimental Physics, GKIAE (Institut teoreticheskoy i eksperimental'noy fiziki)

TITLE: Production of slow pi mesons on light nuclei and the pi-pi interaction

SOURCE: Yadernaya fizika, v. 2, no. 3, 1965, 496-500

TOPIC TAGS: pi meson, pion pion interaction

ABSTRACT: The object of the study was to find the possible resonance states in a system composed of two π-mesons at low energies:

$$Q = M_{\pi\pi} - 2\mu = [(\omega_{\pi_1} + \omega_{\pi_2})^2 - (p_{\pi_1} + p_{\pi_2})^2]^{1/2} - 2\mu \lesssim \mu$$

μ being the mass of a π-meson. The statistical material was obtained by studying the production of slow $\pi^{\pm}$ mesons upon collision of π^- mesons (initial momentum 2.8 GeV/sec) with nuclei of a freon mixture in a 17- and 200-liter bubble chambers. In analyzing the films, all those cases were selected which involved interaction between π-mesons and the nuclei of the working liquid, resulting in the formation of two or more slow π-mesons which stopped in the working substance of the chamber. The Q distributions of the bipion in the range $Q < 100$ MeV were obtained. The distribution for $\pi^+\pi^-$ pairs differs from that for $\pi^+\pi^+$ and

Card 1/2

L 11913-66

ACC NR: AP6001156

$\pi^-\pi^-$ pairs; this may be explained by the presence of a strong $\pi\pi$ interaction in the isotopic state T = 0. Orig. art. has: 5 figures.

SUB CODE: 20 / SUBM DATE: 03Jul64 / ORIG REF: 004 / OTH REF: 001

Card 2/2

KUZNETSOV, YE

Zakon raspredeleniya sluchaynogo vektora. DAN, 2 (1935), 137-193.

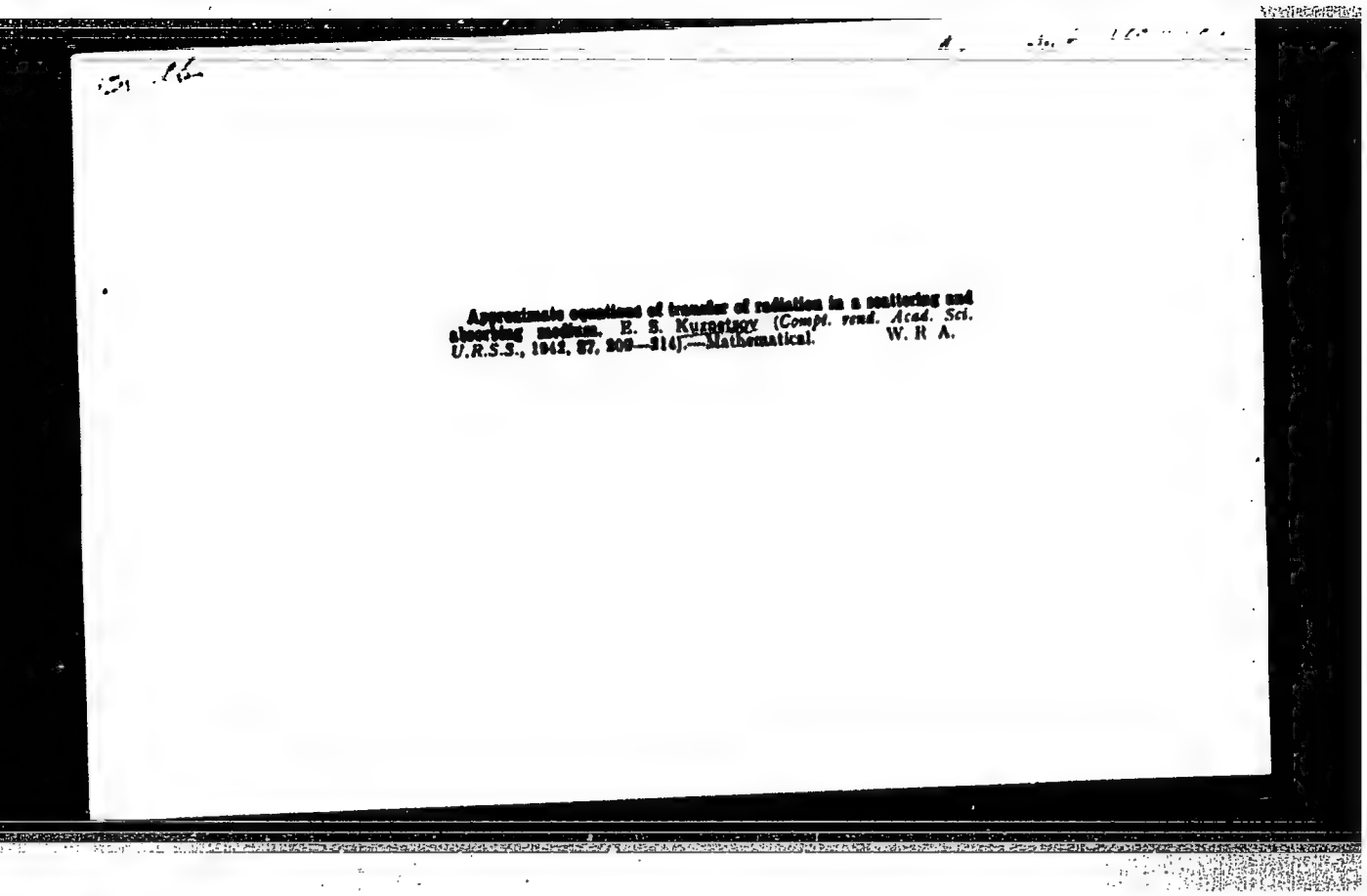
SO: Mathematics in the USSR, 1917-1947
Edited by Kurosh, A. G.,
Markusevich, A. I.
Rashevskiy, P. K.
Moscow-Leningrad, 1948

KUZNETSOV, Ye. S.

Inst. for Theor. Geophysics, Acad. of Sci. USSR, Polucheno, (-1942-)

"Scattering of Light in a Medium Bordering on a Reflecting Wall with Given Albedo" and "Conditions for Heat Flowd on the Boundary Surface of Two Media Radiating Heat Transfer Being Taken into Account,"

I_z. Ak. Nauk SSSR, Ser. Geograf, i Geofiz., Nos. 1-6, 1942.

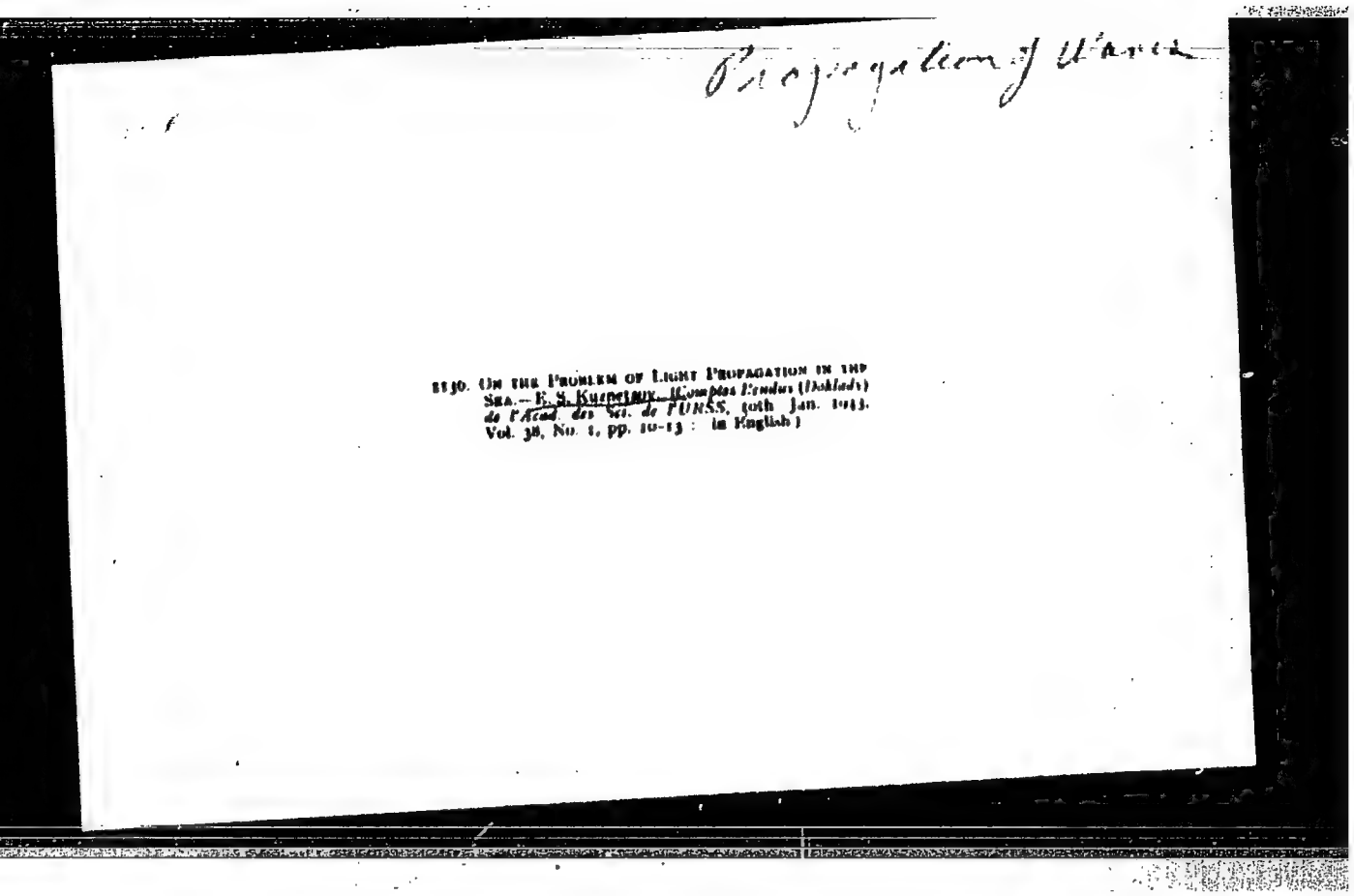


Approximate equations of transfer of radiation in a scattering and absorbing medium. E. S. Kuznetsov (*Compt. rend. Acad. Sci. U.R.S.S.*, 1942, 37, 209—214).—Mathematical. W. R. A.

KUZNETSOV, Ye. S.

Inst., Theor. Geophysics, Acad. Sci. (-1942-)

"Theory of Non-Horizontal Visibility", Iz. Ak. Nauk SSSR, Ser. Geograf, i Geofiz., No. 5, 1943.



Propagation of Waves

1130. ON THE PROBLEM OF LIGHT PROPAGATION IN THE SEA.—E. S. Kuprianov. (*Comptes Rendus (Doklady) de l'Acad. des Sci. de l'URSS*, 30th Jan. 1943. Vol. 38, No. 1, pp. 10–13 : in English.)

KUZNETSOV, Ye. S.

Institute of Theoretical Geophysics (-1945-) Acad. of Sci.

"On the Accounting Diffuse Reflection of Light by the Earth's Surface in the Problem of the Scattering of Light in the Atmosphere."

Iz. Ak. Nauk SSSR, Ser. Geograf. i Geofiz., No. 1, 1945.

KUZNETSOV, Ye. S.

Institute of Theoretical Geophysics, Acad. of Sci.,)-1945-)

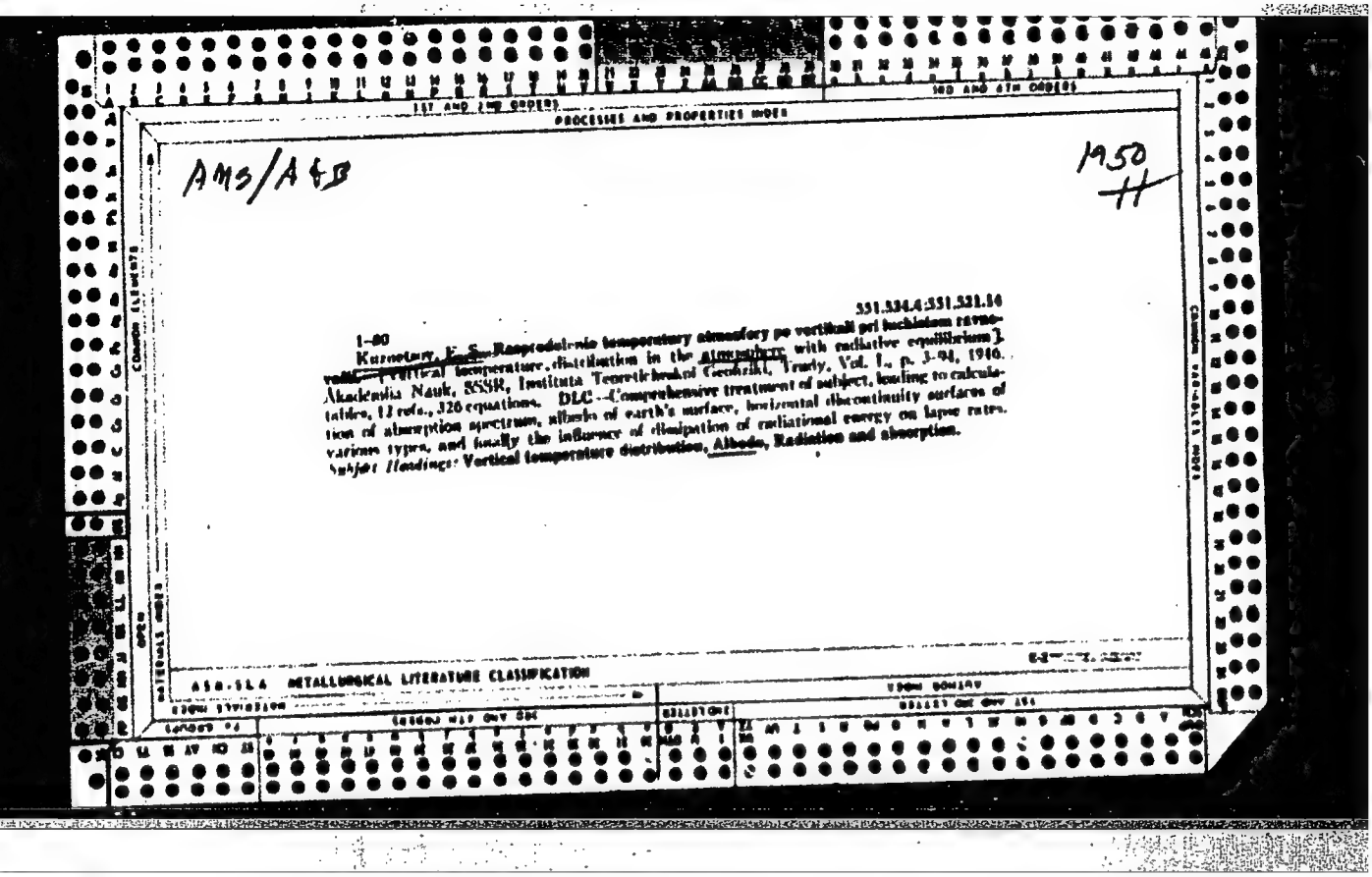
"Application of the Formula of the Theory of Non-Horizontal Visibility to the Calculation of the Sky's Brightness and the Visual Range for the Simplest Forms of the Indicatrix of Scattering."

Iz. Ak. Naud SSR Ser. Geograf. i. Geofiz., No. 3, 1945

KUZNETSOV, E. S.

Primeneniye formul teorii negorizontal'noy ivdimosti k raschetu yarkosti neba i dal'nosti vidimosti dlya prosteyshikh form indikatrisy rasseyaniya (Application of the Formulae of the Theory of Non-Horizontal Visiblity to the Calculation of Sky Brightness and the Visual Range for the Simplest Forms of the Indicatrix of Scattering). Akademiya Nauk SSSR. Izvestiya. Seriya geogr. i geofiz., 1945, v. 9, no. 3, p. 204-229, tables, diagrs., 5 refs. Summary in English.

AS262.A6246 v. 9



AMS/A&B

1950
H

551.534.4:551.521.16

1-80

Kuznetsov, K. S. Raspredelenie temperatury atmosfery po vertikali pri lucheistom ravnovesii [Vertical temperature distribution in the atmosphere with radiative equilibrium]. Akademiia Nauk, SSSR, Institute Teoreticheskoi Geofiziki, Trudy, Vol. 1, p. 3-94, 1946. tables, 13 refs., 326 equations. DLC--Comprehensive treatment of subject, leading to calculation of absorption spectrum, albedo of earth's surface, horizontal discontinuity surfaces of various types, and finally the influence of dissipation of radiational energy on lapse rates. *Subject Headings:* Vertical temperature distribution, Albedo, Radiation and absorption.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

AMS

3.5-181

551.521.3:535.3

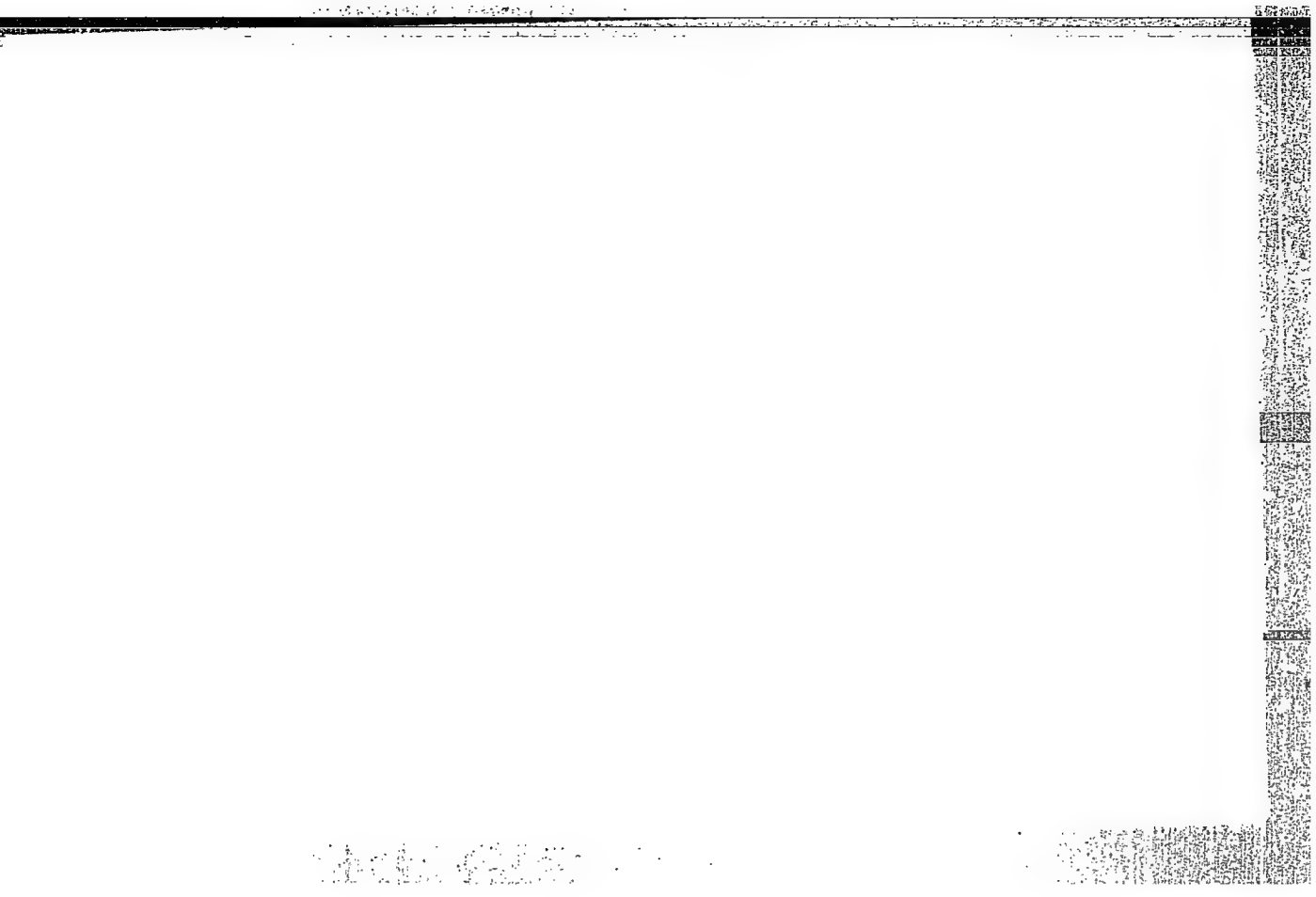
Kuznetsov, E.S., "uchistoe ravnovesie gazovoi obolochki, okruzhaiushchei absoliutno chernuiu sferu. (Radiation balance of a gaseous envelope surrounding an absolu'y black sphere.) Akademiia Nauk, SSSR, Izvestiia, Ser. Geofiz., No. 3:69-93, 1951. 114 equations. DLC- The problem of the distribution of temperature in an absorbing menium surrounding an absolute black body is considered. The integral equation for determining the distribution of temperature both in the case of a constant and variable coefficient of extinction is developed. In addition to instances of an unbounded environment bounded outwardly by spherical boundaries upon which a given radiation intensity impinges. Subject Headings: 1. Radiation balance 2. Extinction coefficients. - Author's abstract. - I.L.D.

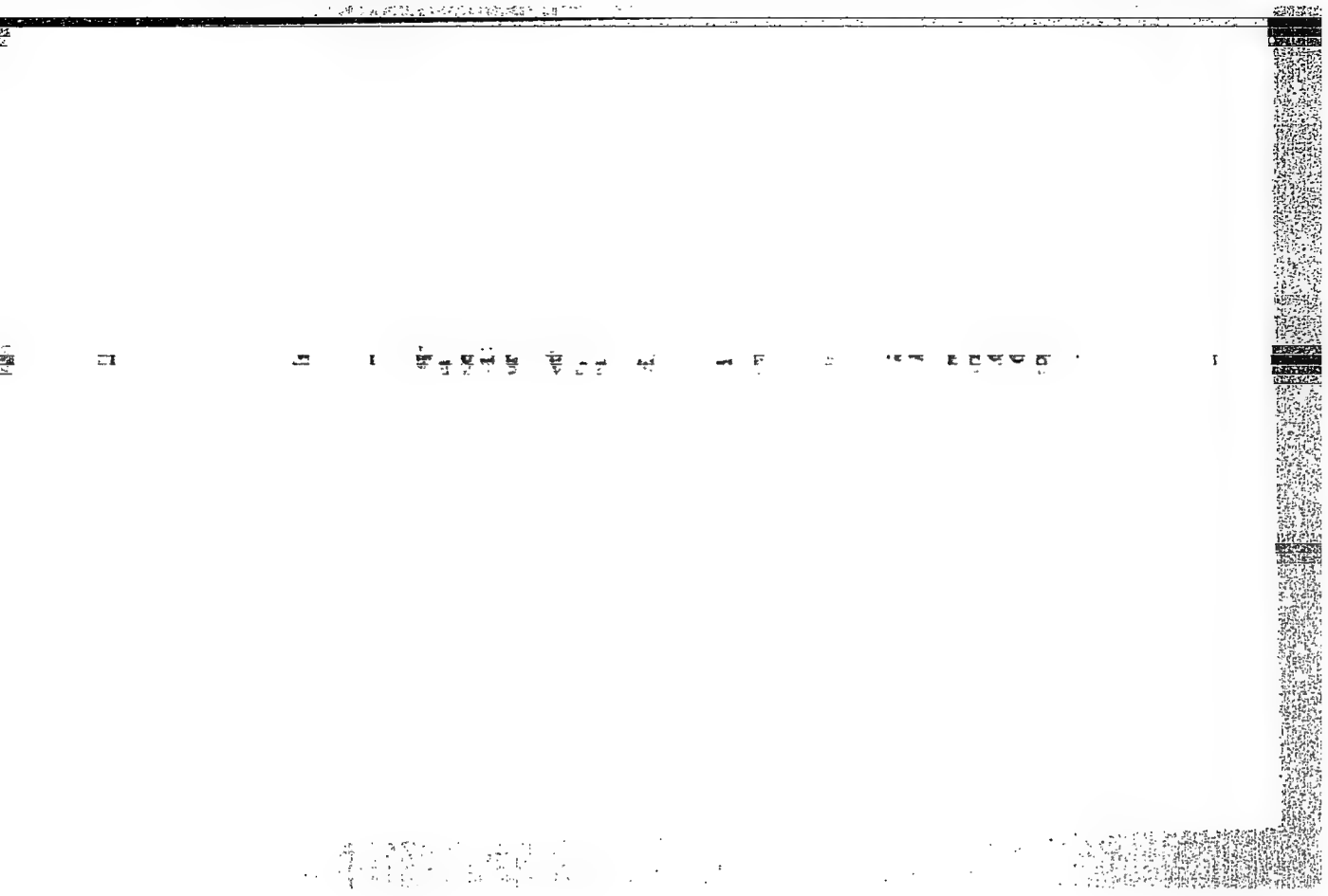
AMS

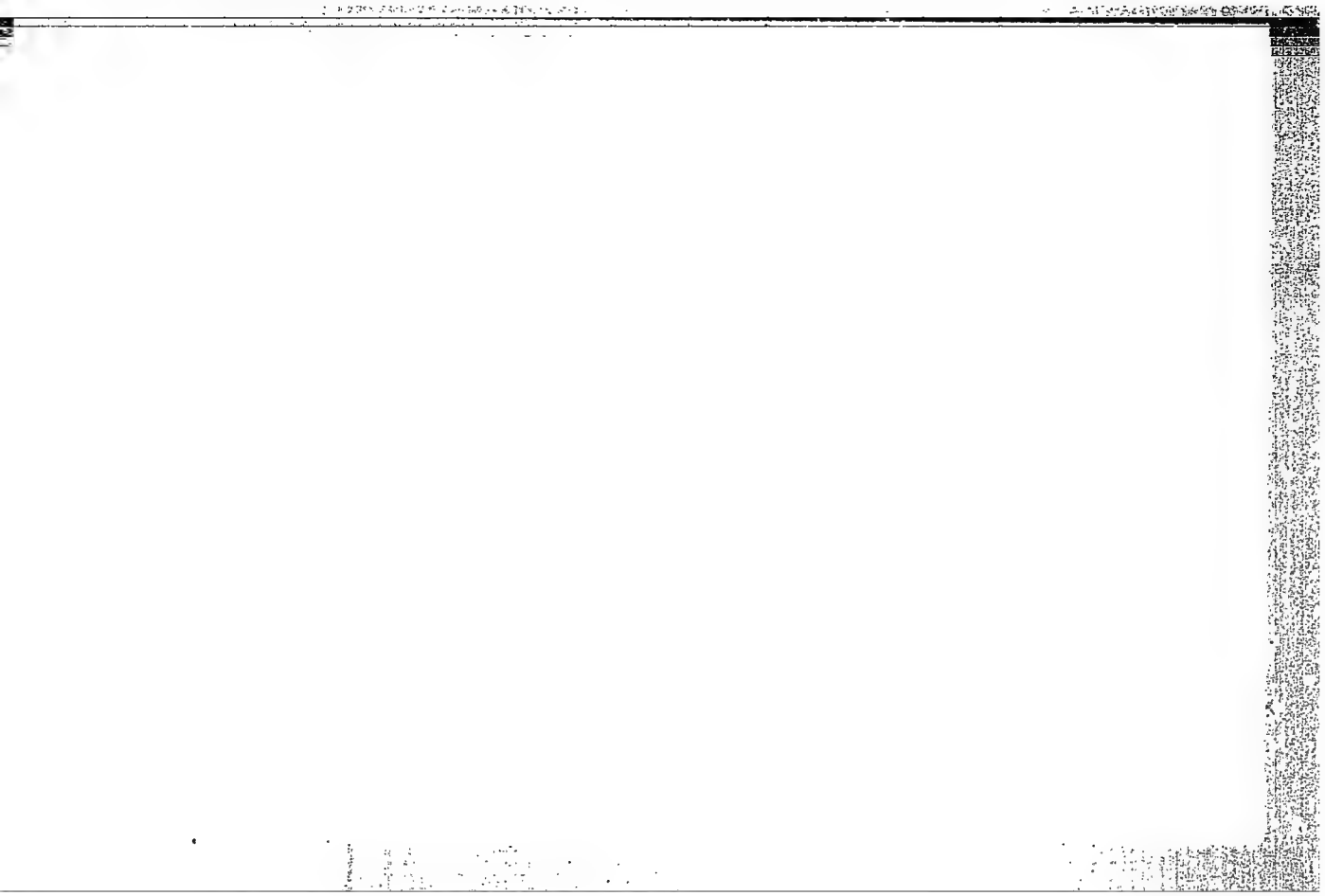
44-133

Kuznetsov, E. S. Obshchii metod postroeniia priblizhennykh uravnenii perenosa luchistoi energii. [General method of setting up approximate equations for transfer of radiative energy.] *Akademiia Nauk, SSSR, Izvestiia, Seriia Geofiz.*, No. 4;71-91, July-Aug. 1951. 2 figs., table, 8 refs., 81 equations. DLC.—A long, theoretical paper developing the approximate equations for transfer of radiant energy depending on boundary conditions and on the index of scattering and, finally, applying the theory to a specific case, with given solar angle, albedo of earth's surface and optical density of the atmosphere. The curves and tables for calculated sky brightness and scattering of the first order at various angles are compared with observed values. Other functions are also shown. *Subject Headings:* 1. Sky brightness 2. Scattering of light 3. Energy equations.—*M.R.*

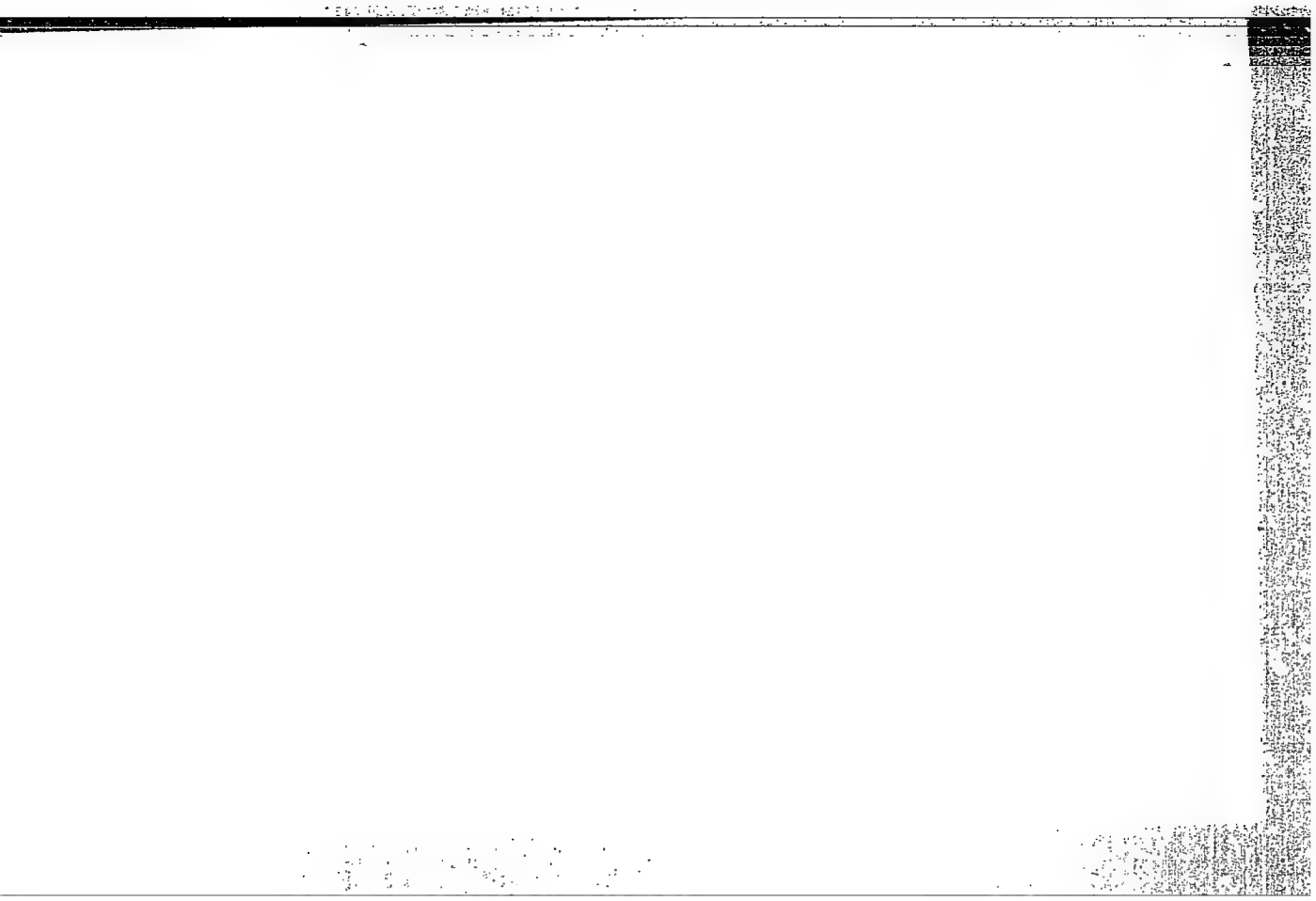
551.521.3

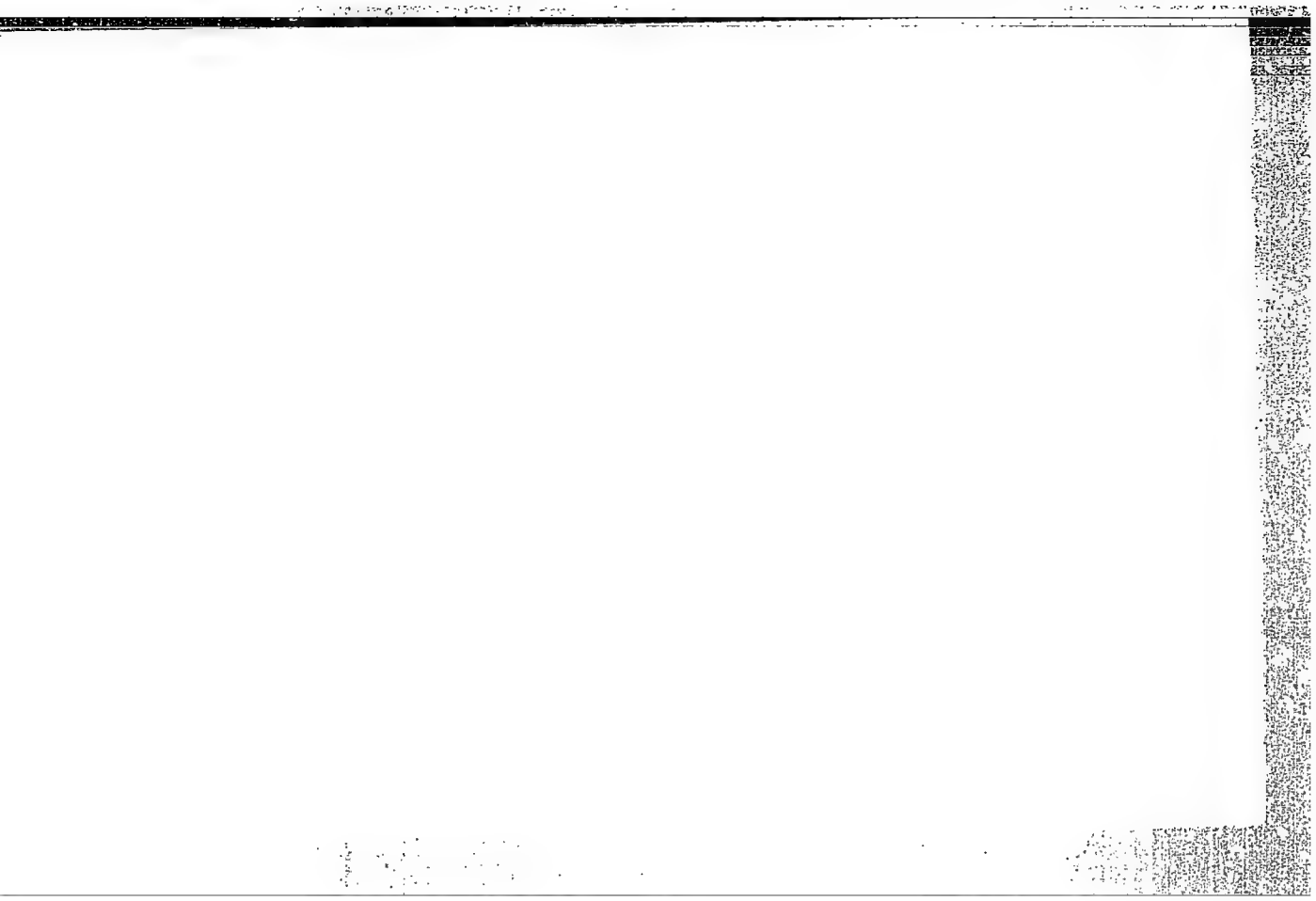






APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928210016-2"





APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928210016-2"

KUZNETSOV, Ye. S.

"Computation of Absorption Coefficients of Water Vapor in Case of Deviation From Buge's Law" Tr. Geofiz. in-ta AN SSSR, No 23, 1954, 3-25

Approximate approach is suggested for solving the equation yielding the absorption coefficient of solar radiation by water vapor. Experimental results concurred concurred with the theoretical ones. (RZhFiz, No 10, 1955)

KUZNETSOV, Ye. S.

"Absorption of Solar Radiation by the Terrestrial Atmosphere" Tr. Geofiz. in-ta AN SSSR, No 23, 1954, 26-64

The basic integro-differential equation expressing the transfer of solar energy in the atmosphere, taking into account absorption and multiple scattering, is so solved by successive approximations. Formulas are derived for computing the absorption of solar energy in a horizontal layer of finite thickness and for computing the solar energy absorbed in a unite volume. These formulas are used for computing absorption in the real atmosphere, assuming that absorption and scattering is due to water vapor only, Computation of absorption is carried out separately for each of six infrared lines of water vapor. (RZhFiz, No 10, 1955)

USSR/Geophysics - Heat, Terrestrial May/Jun 51

"Radiant Equilibrium of a Gaseous Envelop Surrounding an Absolutely Dark Sphere," Ye. S. Kuznetsov, Geophys Inst, Acad Sci USSR

"Iz Ak Nauk SSSR, Ser Geofiz" No 3, pp 69-93

Discusses problem on distribution of temp in absorbing medium surrounding absolutely dark sphere. Derives integral eq for detg distribution of temp both in the case of const coeff of absorption and in the case where it is variable. In addn to the case of unbounded medium, discusses the case of the medium bounded from without by spherical boundary on which

186T44

USSR/Geophysics - Heat, Terrestrial May/Jun 51
(Contd)

radiation of given intensity falls. Investigates solns of integral eqs, and considers certain limiting cases. Submitted 20 Mar 51, by Acad O. Yu. Shmidt.

186T44

KUZNETSOV, Ye. S.

USSR/Geophysics - Dispersion of Light in Atmosphere Jul/Aug 51

"General Method for Deriving the Approximate Equations That Describe the Transfer of Radiation Energy," Ye. S. Kuznetsov, Geophys Inst, Acad Sci USSR

"Iz Ak Nauk SSSR, Ser Geofiz" No 4, pp 71-91

Treats subject for arbitrary dispersion indicatrix expanded into finite or infinite series of Legendre's polynomials. As particular case, derives and solves approx eqs, similar to approx eqs of Schwarzschild. As example, computes illumination of sky under given conditions and compares approx results with exact soln. Submitted 20 Mar 51.

PA 187T29

KUZNETSOV, YE. S.

KUZNETSOV, Ye. S.

Calculation of absorption coefficients of aqeous vapor in the case of deviations from Buge's law. Trudy Geofiz.inst. no.23: 3-25 '54. (MLRA 8:2)
(Absorption)(Vapors)

KUZNETSOV, Ye.S.

Absorption of solar radiation by the earth's atmosphere. Trudy Geofiz.inst. no.23:26-64 '54. (MLRA 8:2)
(Solar radiation)

S/208/62/002/002/003/014
D234/D301

AUTHOR: Kuznetsov Ye.S. (Moscow)

TITLE: Temperature distribution in an infinite cylinder and in a sphere in the case of non-monochromatic radiation equilibrium

PERIODICAL: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 2, no. 2, 1962, 217 - 240

TEXT: The author deduces an integral equation for temperature distribution in a cylinder for the case when this equation is linear, i.e. when the absorption spectrum does not depend on the frequency of radiation. Proofs of the existence and the uniqueness of solution are given; the former is based on an idea originated by Hopf. Reflection of the radiation by a cylindrical wall is considered for the case when the reflection is isotropic and independent of the position of the point on the surface. In this case, if the absorption coefficient does not depend on frequency the final integral equation can be solved by solving two

Card 1/2

Temperature distribution in an ...

auxiliary ones, to which the above proofs can be applied. Generalization of the proofs is given for the case of frequency dependence of the coefficient. The spherically symmetrical case is considered in the same way. There are 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: B. Davison, Proc. Phys.Soc., 1951, 64, no. 382A, 881 - 900; E. Hopf, Mathematical problems of radiative equilibrium, Cambridge 1934

SUBMITTED: December 16, 1961

Card 2/2

ACC NR: AP7003519 (A) SOURCE CODE: UR/0113/67/000/001/0019/0021

AUTHOR: Kuznetsov, Ye. S. (Candidate of technical sciences)

ORG: NIIAT

TITLE: An appraisal of the operational reliability of an automobile

SOURCE: Avtomobil'naya promyshlennost', no. 1, 1967, 19-21

TOPIC TAGS: reliability, MOTOR VEHICLE engine reliability, reliability engineering, vehicle engineering, servicing technique / ZIL-164A MOTOR VEHICLE, ZIL-130 MOTOR VEHICLE

ABSTRACT: A quantitative system has been developed for studying the operational reliability of an automobile. The evaluation is based on maintenance costs per operating mile. Both foreign and domestic cars were studied. The criteria of comparison are: 1) the overall difficulty of servicing; 2) the difficulties in performing typical service operations; 3) the frequency of maintenance needs and the frequency of breakdowns; 4) the number of points requiring servicing; 5) the number of fastenings required to remove individual components; 6) the accessibility of the service points; 7) the necessity to do secondary work in connection with maintenance (preliminary removal of parts, wires, etc); 8) fuels, lubricants, and liquids required; 9) special tools required; 10) the unification of standard parts (fasteners, washers, etc). The evaluation is done in three stages: 1) initial studies of the

UDC: 629.113:62--19

Card 1/2

ACC NR: AP7003519

servicing requirements, parts accessibility, etc, which can be done on a test stand; 2) closely monitored studies of maintenance during the actual operation; 3) compilation of all results, the study of which leads to price adjustments and manufacturing suggestions. The corrective measures fall into three categories: 1) simple corrections not requiring new materials or techniques such as relocating parts; 2) new materials or units which can be incorporated in existing designs (rubber shock rings on the front springs of the ZIL-164A automobile and broader brake shoes on the rear wheels of the ZIL-130); 3) radically new designs such as "cab over engine" with tilting cab for easier maintenance. Orig. art. has: 1 table.

SUB CODE: 13, 14/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 001

Card 2/2

L 36291-66 EWT(m)/T/EWP(w) IJP(c) EM/WW/DJ

ACC NR: AR6004032 SOURCE CODE: UR/0277/65/000/009/0042/0042

AUTHORS: Skoptsov, L. M.; Kuznetsov, Ye. S.

42
B

TITLE: Vibration of ball bearings 17

SOURCE: Ref. zh. Mashinostroitel'nyye materialy, konstruktsii i raschet detaley mashin. Gidroprivod, Abs. 9.48.354

REF SOURCE: Tr. Seminara po vopr. progressivn. metodov shlifov. i dovodki detaley, obespech. vysok. i stabil'n. tochnost' i dolgovechn. podshipnikov kacheniya. M., 1964, 134-142

TOPIC TAGS: ball bearing, bearing race, BEARING STABILITY, MECHANICAL VIBRATION

ABSTRACT: Results of experimental investigations of factors (technological, structural, and exploitational) influencing the vibration of free bearings are analyzed. One of the basic causes of ball bearing vibration is produced by the waviness (form inaccuracy) of the race in the internal ring. The form inaccuracy in the race of the external ring exerts a smaller influence on the vibration than the inaccuracy of the internal ring. The dimensions of the ball seats in both stamped and massive separators should be optimal. Among a number of exploitational factors, the greatest influence on the vibration is exerted by the rotation velocity. [Translation of abstract]

SUB CODE: 13

Card 1/1 UDC: 621.822.7

L 33334-66 EWT(m)/EWP(j) RM

ACC NR: AP6021776 SOURCE CODE: UR/0413/66/000/012/0036/0036

INVENTOR: Kuznetsov, Ye. V.; Ignat'yeva, E. K.; Kostromina, S. Ya.

ORG: none

TITLE: Preparative method for nitrogen and phosphorus-containing organotitanium compounds. Class 12, No. 182722 [announced by Kazan Chemical Technology Institute im. S. M. Kirov (Kazanskiy khimiko-tekhnologicheskiy institut)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 12, 1966, 36

TOPIC TAGS: organotitanium compound, nitrogen containing organotitanium compound, phosphorus containing organotitanium compound, titanium compound

ABSTRACT: An Author Certificate has been issued for a preparative method for nitrogen and phosphorus-containing organotitanium compounds. Bis-(2-hydroxyethoxy)-bis-(aminoethyl)-titanium is reacted with derivatives of methylphosphonic acid substituted in methyl in a solvent. Hydroxymethylphosphonic acid is used as a derivative of the substituted methylphosphonic acid for preparing new compounds. [BN]

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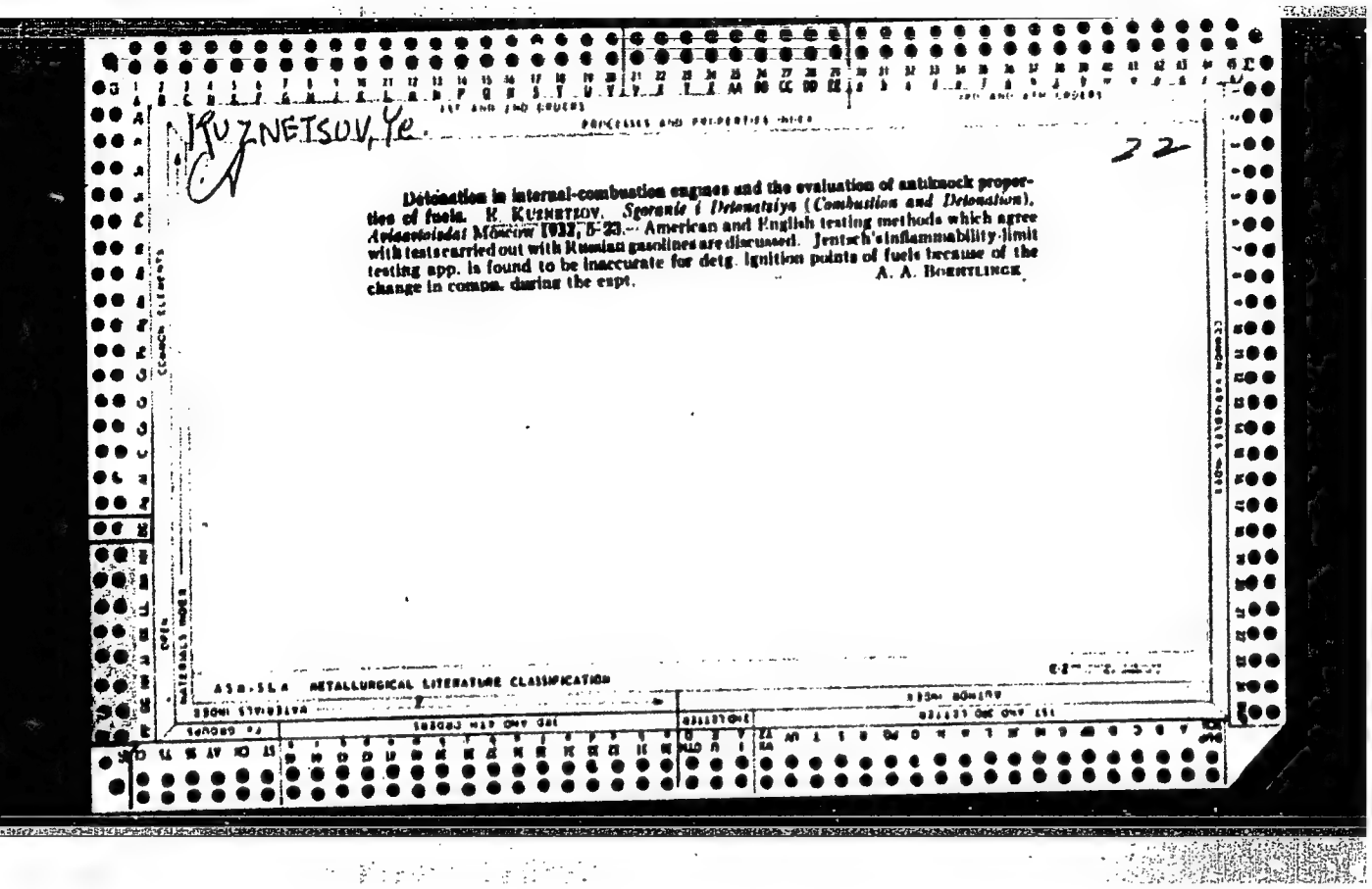
Card 1/1 UDC: 547.419.1'258.2.07



KUZNETSOV, Ye.

32

Detonation in internal-combustion engines and the evaluation of antiknock properties of fuels. K. KUZNETSOV. *Sgoranie i Detonatsiya* (*Combustion and Detonation*), *Aviaavtoizdat Moscow* 1932, 5–23.— American and English testing methods which agree with tests carried out with Russian gasolines are discussed. Jentsch's inflammability-limit testing app. is found to be inaccurate for detg. ignition points of fuels because of the change in compn. during the expt.

A. A. BOSHTLINGK.

A3B-SLA METALLURGICAL LITERATURE CLASSIFICATION

KUZNETSOV, Ye.

Calculating the required number of dump trucks for work in conjunction with excavators. Avt.transp. 32 no.7:14-15 Jl '54. (MLRA 7:9)

1. Moskovskiy avtomobil'no-dorozhnyy institut imeni V.M.Molotova.
(Dump trucks) (Excavation)

KUZNETSOV, YE. S.

"Study of Performance of Transmission Oils of Various Viscosity," Min Higher Education USSR, Moscow Automotive and Road Inst imeni V. M. Molotov, Chair "Operation of Automotive Transport," Moscow, 1955.

SO: M-972, 20 Feb 56

VINOGRADOV, V.; KUZNETSOV, Ye.; VILENKIN, A.

Improve the quality of automobile transmission oils. Avt. transp. 33 no.1:16-17 Ja'55. (MLRA 8:3)
(Automobiles--Lubrication)

KUZNETSOV, Ye., kandidat tekhnicheskikh nauk.

Pamphlets on new methods of controlling fuel economy in automobiles. Avt.transp.33 no.10:38-39 O '55. (MLRA 9:1)
(Automobiles--Fuel systems)

KUZNETSOV, Ye.S., kandidat tekhnicheskikh nauk; MAL'KOVA, N.V., tekhnicheskiy redaktor

[Organization of the technical maintenance of automobiles in the U.S.A.] Organizatsiia tekhnicheskogo obsluzhivaniia avtomobilei v SShA; obzor. Moskva, Nauchno-tekhn. izd-vo avtotransp. lit-ry, 1956. 71 p. (MLRA 10:3)

1. Moscow. Gosudarstvennyy nauchno-issledovatel'skiy institut avtomobil'nogo transporta.
(United States--Automobiles--Repairing)

KUZNETSOV, Ye.S., kandidat tekhnicheskikh nauk.

Analysis of methods of testing transmission oils. Trudy MADI no.19:102-114 '56. (MLRA 10:1)

(Automobiles--Lubrication)

VINOGRADOV, V. [deceased]; KUZNETSOV, Ye.

Evaluating the antiwear properties of transmission oils on a geared stand by means of models. Avt.transp. 34 no.3:19-20 Mr '56. (Automobiles--Lubrication) (MLRA 9:7)

KUZNETSOV, Ye., kandidat tekhnicheskikh nauk.

Automobile maintenance in the U.S.A. Avt.transp. 34 no.9:36-38 S '56.
(MLRA 9:11)

(United States--Automobiles--Maintenance)

KUZNETSOV, Ye.

At the conference of the automobile section of S.A.E. Avt. transp. 34 no.10:38 O '56. (MLRA 9:12)

(St. Louis--Automobile--Congresses)

KUZNETSOV, Ye.S., kandidat tekhnicheskikh nauk

Investigating lubricating properties of transmission oils. Avt. i trakt. prom. no.5:28-30 My '57. (MLRA 10:6)
(Lubrication and lubricants)

KUZNETSOV, Ye., kandidat tekhnicheskikh nauk.

Effectof the working viscosity of oils on hydraulic losses and the efficiency of transmission devices. Avt.transp. 35 no.1:24-25 Ja '57. (MLRA 10:3)

(Automobiles--Transmission devices)

KUZNETSOV, Ye., kandidat tekhnicheskikh nauk; PLEKHANOV, I., inzhener

"How to increase automobile mileage before repairs are needed" by E.IA. Neiberg. Reviewed by E.Kuznetsov, I.Plekhanov. Avt.transp. 35 no.6:38-39 Je '57. (MLRA 10:7)
(Automobiles--Maintenance and repair) (Neiberg, E.Ya.)

KUZNETSOV, Yevgeniy Semenovich; PUSHKIN, P.I., red.; MAL'KOVA, N.V., tekhn.red.

[Prevention of traffic accidents] Preduprezhdenie dorozhnykh proisshestvii. Moskva, Nauchno-tekhn.izd-vo avtotransp.lit-ry, 1958. 94 p. (MIRA 13:1)
(Traffic safety)

KUZNETSOV, Yevgeniy Semenovich. Prinimali uchastiye: KUROPTEV, V.T.; LEYDERMAN, S.R.; NOSOV, L.I.; PLEKHANOV, I.P.; PLESHAKOVA, T.I.; SALOSHIN, N.P.; SOKOLOV, O.V.; SHIBIN, P.V.; YAKOVLEV, A.V.. MARTENS, S.L., red.; ZUYEVA, N.K., tekhn.red.

[Efficient conditions for the maintenance of motor vehicles and methods for its improvement] Ratsional'nye reshimy tekhnicheskogo obsluzhivaniia i metodika ikh korrektirovaniia. Moskva, Avtotransizdat. Pt.1. [Every day and the first maintenance of motor vehicles] Ezhednevnoe i pervoe tekhnicheskoe obsluzhivanie. 1958. 35 p. (MIRA 13:5)

(Motor vehicles--Maintenance and repair)

AUTHORS: Kuznetsov, Ye. S., Sokolov, O. V. 32-24-6-36/44

TITLE: The Use of Casts in Measuring the Wear of Parts (Ispol'zovaniye slepkov pri izmerenii iznosa detaley)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 6, pp. 774 - 775 (USSR)

ABSTRACT: The method of grooves (impressions) is much used in these measurements by applying them onto the surface to be investigated by means of a square diamond pyramid. A method for the determination of the dimensions of grooves by special casts, which can later be measured under the microscope, was developed. The casts of transparent celluloid proved to be of the greatest advantage; in this connection a maximum measuring deviation of 2 % is given. It is recommended to stick to the square shape of the celluloid film; its thickness should be the 1o - 15-fold of the depth of the groove, and its lateral length about 2o times that of the groove diagonal. After pretreatment the humid film is pressed onto the groove for 15 - 3o seconds, drying being accelerated by

Card 1/2

a heating lamp. The present method is especially effective in tests during operation as stopping of machines, of the mechanism , or of the plant can be reduced to a minimum, and because no dismounting or direct measurements on parts has to be carried out.

1. Machines--Maintenance 2. Metals--Test methods 3. Celluloid --Applications

Kuznetsov, Ya.

KUZNETSOV, Ya., kand. tekhn. nauk.

Using "nigrol" in lubricating running parts of automobiles. Avt. transp. 36 no.1:12-13 Ja '58. (MIRA 11:1)
(Automobiles--Lubrication)

KUZNETSOV, Ye., kand. tekhn. nauk.

Efficient automobile lubrication. Avt. transp. 36 no.4:9-11 Ap '58. (MIRA 11:4)
(Automobiles--Lubrication)

KUZNETSOV, Ye.; KRUGLYAK, G.

Using new TO-1 maintenance regulations. Avt. transp. 36 no.8:14-16 Ag '58. (MIRA 11:9)
(Automobiles--Maintenance and repair)

28(5)

AUTHORS: Kuznetsov, Ye. S., Kuroptev, V. T.

SOV/32-25-8-37/44

TITLE: Method for Determination of Wear of Friction Details

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 8, pp 1006-1007 (USSR)

ABSTRACT: A new method for the determination of abrasion of friction details was developed as well as a new method of measuring was applied. N. P. Saloshin and A. V. Yakovlev participated in this work. Borings are made on the surfaces to be examined (diameter 8.2 mm, depth 2-5 mm). The borings are measured with the indicator instrument (Fig 1) by putting this instrument first on the edge of the boring and later into the boring itself (Fig 2) thus determining the dimensions of the boring. The absolute size of the abrasion of the surface investigated can be determined by the measuring data before the boring and after the friction strain. To eliminate the falling-in of abrasion products during the friction strain an asbestos cord is inserted and removed before the measuring. The described method makes possible more accurate measurings than the methods applied at present. There are 2 figures.

Card 1/2

Method for Determination of the Wear of Friction Details

SOV/32-25-8-37/44

ASSOCIATION: Nauchno-issledovatel'skiy institut avtomobil'nogo transporta
(Scientific Research Institute of Automobile Transport)

Card 2/2

KRUGLYAK, G.; KUZNETSOV, Ye.; PLESHAKOVA, T.

Using niger oil in lubricating motortruck chassis. Avt. transp. 37 no.11:26-27 N '59. (MIRA 13:2)
(Motortrucks--Lubrication)

KUZNETSOV, Yevgeniy Semenovich; ARKHANGEL'SKIY, V.M., red.; DONSKAYA, G.D., tekhn.red.

[Lubrication systems for motor vehicles] Rezhimy smazki avtomobilei. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transporta i shosseinykh dorog RSFSR, 1960. 77 p.

(MIRA 13:5)

(Motor vehicles--Lubrication)